

ABSTRACT OF THE DISCLOSURE

The present invention provides a multi-level model-based intelligent agent diagnosis system and method for computer-controlled machinery operative to reduce the complexity typically associated with conventional model based diagnostic systems. The system utilizes a plurality of intelligent agents arranged in a plurality of physically hierarchical layers such that the tasks associated with accomplishing model based diagnosis are distributed amongst the intelligent agents if each layer wherein information gathered from a first lower level intelligent agents is processed by at least one other higher level to realize system fault diagnosis. The system provides increased processing speed of modeling and/or model identification such that faster and more accurate failure isolation and identification is accomplished.